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MR. SAMUEL FERGUSON, Q.C., read the following paper:-

On a Passage in the "Historia Anglobum" of Henry of Huntingdon, RELATIVE TO STONEHENGE.

I DESIRE to call the attention of the Academy to a passage in the "Historia Anglorum" of Henry of Huntingdon, descriptive of the appearance of Stonehenge towards the middle of the twelfth century, which does not appear to have been observed on by any of the numerous writers who have treated of that monument. Speaking of the marvels of Britain, he says-" Secundum est apud Stanenges; ubi lapides miræ magnitudinis in modum portarum elevati sunt, ita ut portæ portis superpositæ videantur, nec potest aliquis excogitare quâ arte tanti lapides deo in altum elevati sunt, vel quare ibi constructi sunt;" that is-"The second marvel is at Stonehenge, where stones of amazing bigness are raised in manner of gateways, so that gateways appear erected over gateways; nor can any one find out by what contrivance stones so great have been raised to such a height, or for what reason they have been erected in that place." ("Mon. Hist. Brit." vol. i., p. 649, A). The latter clause of the passage has been relied on by those who discredit the account of the origin of Stonehenge given by Geoffrey of Monmouth and Girald Cambrensis; but the statement that the place presented the appearance of gateways erected over gateways has been, so far as I can find, passed by without any comment or explanation; the only notice seemingly glancing at it being that by Herbert in his "Cyclops Christianus" (p. 160), where, citing the passage with a view to displace the force of its second clause, by showing that Henry afterwards adopted the statements of Geoffrey, he says—"His striking description must be that of an eye-witness, but no tradition seems to have then reached his ears."

The image presented by the expression "portæ portis superpositæ" would be sufficiently definite, were it not for the employment of the verb videantur, which usually imports something seeming, rather than real; and probably the passage has been regarded as conveying no more than that the higher portæ of the internal trilithons are seen above the intercolumniations and continuous imposts of the external circle, like gates rising above gates; but the word "superpositæ" seems irreconcileable with that construction; and it appears more agreeable to the character of the sentence to refer the element of "seemingness" to the figurative expression, "portæ portis;" and to give the verb its literal construction, rendering it, "so that as it were gateways are seen erected over gateways." This construction appears quite in accordance with the usually accepted meaning of the name Stonehenge—i.e. "stone gallows"—more especially if the superstructure existed over one trilithon only; but it is not agreeable to any of the numerous plans or resto-

^{* &}quot;Superimpositæ," Francof. Ed. 1601, p. 299.

rations of the monument, in all of which it seems to be assumed that there were no further constructions above the line of imposts, either of the external ring or of any of the contained trilithons. There also appears great difficulty in applying the language of Henry to the surrounding ring of pillar stones, connected as they still are to a considerable extent, by a continuous cornice, depriving them of the appearance of detached doors or gateways. This cornice is composed of a series of imposts, mortised on the under face into tenons wrought on the heads of the supporting pillar stones. Each pillar has two tenons, which lock respectively into the mortises of two contiguous imposts abutting over the centre of the pillar, so that all the spaces, when perfect—as probably they were seven hundred years ago—were spanned by a continuous series of imposts. In the arrangement of the internal trilithons the case is different. Each pair of pillars here supports, or supported, a single impost, covering the whole breadth of both supports and the space between, and locking by two mortises on its under face into a single tenon on each pillar. Each trilithon, or group of three, thus presents the appearance of a lofty isolated gate or doorway. This image is the same which presented itself to Olaus Magnus four hundred years later, when describing a similar trilithic monument, and which I believe is the only other megalithic structure of that kind in Western Europe of which any evidence exists, between Scara and Kelby, in the south of Sweden: - "Mirâ compagine immensa saxa in modum altissimæ latissimæque januæ sursum transversumque labore gigantum erectæ; i. e. "a structure of huge rocks, raised by the efforts of giants, with a wonderful connexion, in the form of a very lofty and wide doorway." ("De Gent. Sep." l. i., c. 30), and he annexes a rude drawing of the monument (l. i. c. 29); and Stowe, in his "Annals" (p. 53), applies the same language to the trilithons of Stonehenge—" Every couple sustaineth a third stone, lying overthwart gate-wise." But the language of Henry seems to intimate that in his time some of those gate-like constructions had other trilithons of a similar kind erected over them; and a circumstance taken notice of by me, and by an accurate observer who accompanied me on a visit to Stonehenge in September, 1863, affords grounds, independently of the passage from Henry, for surmising that, in regard to at least one of the trilithons, such an upper storey, if I may so call it, did formerly exist.

It will be in the recollection of those members of the Academy who have seen Stonehenge, or looked at representations or models of it, that the lintel or impost of the central trilithon has fallen; and those who have seen it lying at the foot of the leaning pillar-stone which once formed one of its supports, will remember the emotion excited by its vast size, and the surprising height to which it had once been elevated. It is now a little more than fifteen feet long by three feet nine inches broad, and two feet nine inches thick. Its southern end has been pushed forward in its descent by the fall of the supporting pillar-stone at that side, which now lies prostrate, broken in two, with its upper end within a few feet

of the mortise into which its tenon, still visible when Stukeley wrote in 1760, formerly fitted. The lintel in its descent has also been canted over, so that it lies on edge, presenting what was formerly its under surface obliquely towards the spectator entering the circle from the main avenue, and at once arresting attention by the well-defined sockets or mortises cut in that under surface. These are indicated in the perspective by Inigo Jones in his "Stonehenge Restored," copied into Charlton's "Stonehenge Restored to the Danes;" and are shown in plates 18, 21, and 22 of Stukeley's "Stonehenge Restored to the British Druids;" and again are conspicuous in the ichnographic plan of the monument given by Sir Richard Colt Hoare in his elaborate illustration of this part of Wiltshire, copied into the "Celtic Druids" of Godfrey Higgins; and, finally, I may observe that they, as well as the mortises on the under surface of the lintel constituting part of the trilithon to the right, which fell in January, 1797, are accurately indicated in the bird's-eye view given in the "Illustration of Stonehenge and Abury" of Mr. Joseph Browne of Amesbury, the attending illustrator of the monument. Notwithstanding the great amount of attention given to this central impost, the fact appears to have escaped remark until observed on the occasion I have referred to, that on its upper surface, opposite to, and corresponding in position with the well-known mortises on its under surfaces, there exist cavities which, though shallow, and less regular in form, appear also as if part of the design, and, independently of the language of Henry, suggest the idea of having served as sockets for some kind of superstructure.

Such was the impression vividly conveyed to my mind on observing the cavities in question in 1863. I have recently, and since giving notice of this communication, had an opportunity of making a renewed and very careful inspection of the monument; and the result is that I cannot with certainty affirm these cavities to be artificial. Neither, on the other hand, can any one with safety affirm them to be natural. If artificial, and if their purpose was to receive the bases of other pillars, supporting a second cross-piece, as the language of Henry would imply, it is certain that such superstructure was confined to this one central trilithon, for there are no corresponding cavities on the upper surfaces of the adjoining trilithons to the left and right. In the mortises of the impost which fell in 1797 the tool-marks (apparently made by a picking instrument) are plainly visible; they are also distinguishable, though the traces are fainter, in those on the under surface of the central impost; but the hollows of the cavities here in question are smooth to the eye and touch, save in one spot, where there exist some traces of tooling apparently recent. Add to this the fact that the siliceous sandstone of which the trilithons are composed has a tendency to disintegrate into bowl-shaped hollows, as seen on this and several of the adjoining blocks; and there arises a considerable probability of those cavities being natural.

On the other hand, some considerations present themselves, for the

appreciation of which it is necessary to go a little into detail, as regards the circumstances of the group formed by this impost, and the remains immediately connected with it. I cannot better describe its general appearance than in the language of Stukeley, premising merely that his "altar" designates a fallen block of longer and more slender proportions than the impost containing the mortises, which lies flat on the ground, pressed down by the weight of the fallen impost lying across it near one end, and of the fallen pillar also lying across it near the other. "The trilithon of the upper end of the adytum," says Stukeley, "was an extraordinary beauty. But, alas! through the indiscretion probably of somebody digging there between them and the altar, the noble impost is dislodged from its airy seat, and fallen upon the altar, where its huge bulk lies unfractured.

Decidit in solidam, longo post tempore, terram

Pondus, et exhibuit junctum cum viribus artem.'

OVID. Met.

"The two uprights that supported it are the most delicate stones of the whole work. They are, I believe, above thirty foot long, and well chisell'd, finely taper'd, and proportion'd in their dimensions. That southward is broke in two, lying upon the altar. The other still stands entire, but leans on one of the stones of the inward oval.

The fall of this trilithon took place about 1620. The impost about which this inquiry is chiefly concerned is stated to have originally measured sixteen feet; but owing, no doubt, to the injuries it has sustained by the destructive curiosity of visitors, it is now reduced to fifteen feet some inches or thereabouts, for the corrosions and irregularities of its surface, and the shattered condition of its ends, render an accurate measurement somewhat difficult, and only to be accomplished by the aid of appliances which would reduce its bevelled and irregular outlines to the square. It lies on edge, presenting the flat of what was its under surface to the east. This face has suffered comparatively little; but time and the weather have made great ravages on the western or upper face. The lower edge on which it rests is straight; the upper edge somewhat convex, indicating that this latter lay towards the outside when in situ, for such is the arrangement of the two adjoining trilithons which are still standing. The mortises on the under surface are eight feet six inches apart from inner, and twelve feet two inches apart from outer, edge to edge, and are unequal both in area and depth. That towards the southern end, which formerly locked on the tenon of the leaning pillar, is an oval bowl, twenty-five inches in its greater by seventeen inches in its lesser diameter, and seventeen inches deep; that towards the northern end, which locked on the tenon of the fallen pillar, is an oval bowl, nineteen inches in its greater by thirteen in its lesser diameter, and ten inches deep,—being, however, much abraded and reduced in depth on its outer edge towards the northern extremity of the impost.

The cavities, about which I am more immediately concerned, on the western or upper face, are nine feet six inches apart from inner, and eleven feet seven inches apart from outer, edge to edge. They are of irregular circular form. That towards the southern end of the impost is a dish-shaped indentation, thirteen inches in its greater by twelve inches in its lesser diameter, and $3\frac{1}{2}$ inches deep. That towards the northern end is a dish-shaped indentation, twelve inches in its greater by ten inches in its lesser diameter, and four inches deep. The major diameters of these hollows lie in the direction of the length of the impost. The lips of the upper cavities are worn into irregular indentations; and hollows of from eight to ten inches in breadth, and about two inches in depth, extend from both to a distance of more than a foot. It is not impossible that the same process of erosion may have obliterated tool marks, if such existed within the cavities. The tool marks have in fact disappeared from the surfaces both of the squared leaning pillar and of its supporting leaning obelisk, which is grooved in the direction of its length, although plainly visible on the tops of the fallen pillars on the right, where they have been picked down into smooth surfaces for the bedding of their imposts. Then it must be owned to be extremely improbable that chance corrosions should have resulted in the formation of cavities so nearly symmetrical with the opposite mortises.

This impost and the fallen pillar cover about nine feet of the exposed surface of what has been called the "altar stone." Where its ends appears from under these incumbent masses, they are reduced in thickness by the breaking off of portions of the exposed surface; so that, partly owing to this cause, and partly to the obstruction of the ruins above, it is impossible, in the present situation of things, to say whether indentations corresponding to the cavities in question existed or exist on this stone also; but its dimensions and position are such, that if an upper trilithon ever stood over the central impost, this stone was probably the lintel of it; and if, further, the recognised derivation of Stonehenge be correct, this probably was the object which gave to the monument its patibulary designation of "Stone Gallows." It is just sixteen feet in length by three feet four inches broad, and it is stated by Stukeley to be twenty inches thick. It has been surmised to be an altar, and a table of astronomic observation; and some reliance has been placed on its position, as seen on the ground plans of the place, being symmetrical with the surrounding objects: but its position, in fact, is considerably off the line of theory, and is not symmetrical with any line of construction, but is such as a heavy stone tumbled from above the central trilithon might take in its fall, especially if its fall were occasioned by the tilting over of upright supports; and in such case the height of the supports would probably be about the measure of the distance to which their fall would cast the lintel resting on them. It lies north-east by south-west, at a distance of about ten feet from the foot of the central trilithon, and nearly but not quite parallel to its inner face, as it originally stood.

Supposing such a superstructure to have existed, it may be asked what bearing would that fact have on the question of the age or uses of the monument? I shall venture no further in speculation than to observe, that the gateway erected over the gateway is a form of commemorative monument in the East, and that if anything in the construction of Stonehenge looked to an Eastern model, it would probably turn the scale which has lately hung in pretty even balance between a post-Roman and a pre-Celtic date for its erection. A remarkable example of the Eastern form of monument may be seen in "Fergusson's Picturesque Illustrations of Indian Architecture," where the details are given of a structure of this kind, of three stories, forming part of the enceinte of a sepulchral tope at Sanchee, near Billah, in Central India. The rest of the enclosure is composed of stone pillars carrying a continuous impost, and so much in the Stonehenge taste, that the writer (p. 22) queries, "Are these the originals of the trilithons of Stonehenge?" The same species of monuments occur in variously modified forms throughout Tartary and the remote East. Several examples may be seen under the head "Pailoos," in the "Handbook of Architecture" by the same writer (pp. 137 et seq.).

A sculptured object, ten inches in length, observed by Dr. Tate in 1861, which attracted the attention of the British Association at their Bath meeting in September, 1864, exists about midway between the mortises on the under surface of the fallen impost. It is nearly symmetrical with the lines of the stone, six inches nearer the southern mortise, and leans towards the south. It consists of a straight upright line, broadly hollowed out, and with an appearance of antiquity, having at top a curve similar to a reaping-hook, or a Roman letter o reversed, and below a smaller curve of the same character turned the opposite way. The curved portions of the sculpture appear to be sharply incised, having an angular section and a modern aspect; but they also bear the appearance of having been hacked and gone over recently with some tool, so that there is a difficulty in saying that the whole may not be ancient. It bears a generic resemblance to an object sculptured on one of the stones of the sepulchral chambers of the Butte of Tumiac in the Morbihan. The letters LV inscribed within the upper curve appear to be modern.

The tendency of recent explorations is to throw back the period of monuments of this class. The possibility that an examination of the lower surface of the so-called "altar stone" at Stonehenge might disclose some constructive or other traces calculated to explain the language of Henry, induces me to observe, that the pressure both of the

impost and fallen pillar could readily be removed by a simple mechanical appliance without the slightest disturbance to the rest of the fabric.

Annexed is a list of the works which have been examined with a view to see how far the evidence of Henry of Huntingdon has been regarded.

"Camden's Britannia." By Gibson.

"The Most Notable Antiquity of Great Britain, Stonehenge, Re-

stored, by Inigo Jones:" 1655.

"Chorea Gigantum, or the most Famous Antiquity of Great Britain, Stonehenge, Restored to the Danes;" By Walter Charlton: 1663.

"Stonehenge, a Temple, restored to the British Druids." By Wil-

liam Stukeley, M.D.: 1740.

Keysler, "Antiquitates Septentrionales."

King, "Monumenta Antiqua Britanniæ:" 1799. Vol. i., pp. 188,

et seq.
"Ancient Universal History:" 1746. Vol. xviii., pp. 430 et seq.
"Bergin Bishard Colt. Hoare, including "History of Wiltshire." By Sir Richard Colt Hoare, including the Restorations of Waltire, Smith, and Account of Stonehenge by a

Gentleman of Salisbury.

"The Celtic Druids." By Godfrey Higgins: 1827.

"Cyclops Christianus." By the Hon. Algernon Herbert: 1849.

Articles "Stonehenge" and "Wiltshire" in "Encyclopædia Britannica," Edition of 1860.

Article "Stonehenge," in "Quarterly Review," July, 1860.

- "An Illustration of Stonehenge and Abury," by H. Browne:
- "Gentleman's Magazine," December, 1864, Article "Bath Meeting of the British Association."

Captain Meadows Taylor read a paper, "On a Group of Ancient Cairns on Twizell Moor, in Northumberland."

Professor W. K. Sullivan read a paper "On the Composition and Mode of Formation of a peculiar Hydrated Mineral containing Zinc, and on the Formation of the Halloysites found associated with Zinc Ores."

The Secretary announced a donation by Charles W. Levinge, Esq., of Levington Park, of the remains of an ancient oak canoe, found in Owel, Co. Westmeath.

The marked thanks of the Academy were voted to the donor.